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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,676	06/26/2003	Timothy M. Crowder	9336-9	5387
20792 7590 03/05/2007 MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			EXAMINER NICOLAS, FREDERICK C	
			ART UNIT 3754	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 03/05/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/606,676

Applicant(s)

CROWDER ET AL.

Examiner

Frederick C. Nicolas

Art Unit

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24,51-53 and 61-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,15,16,18-24,51-53 and 61-65 is/are rejected.
- 7) ☒ Claim(s) 12-14 and 17 is/are objected to.
- 8) ☒ Claim(s) 1-24,51-53 and 61-65 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2,4,9,12/04;1,6,10/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-24,51-53,61-65 in the reply filed on 12/21/2006 are acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2,5,7-11,15-16,18,21-24,51-53,61-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Callahan 4,472,091.

Callahan discloses a flowably dispensing or processing dry powders from a device having a dry powder flow path as seen in Figure 1, which comprises generating a first non-linear vibration input signal, the first non-linear input signal comprising a plurality of different selected frequencies that correspond to a first non-pharmaceutical dry powder formulation (P) and applying the first non-linear vibration input signal to a portion of a dry powder flow path while the first dry powder formulation is flowing therethrough (col. 2, ll. 45-68 onto col. 3, ll. 1-64 onto col. 4, ll. 1-66), wherein the selected frequencies correspond to flow characteristic frequencies of the first dry powder, and wherein the generating step is carried out to cause the dry powder to flow in a substantially uniform fluidic manner without aggregation and/or agglomeration (col.

Art Unit: 3754

3, ll. 27-41). The device shown by Callahan will perform the method recited in claims 1-3 during normal operational use of the device.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callahan 4,472,091.

Callahan has taught all the features of the claimed invention except that the dispensing step is carried out to serially dispense meted quantities of between 10 μ g-10mg, as well as the claimed subject in claims 4 and 6.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the dispensing step of the meted quantities of Callahan to be between 10 μ g-10mg and as well as the claimed subject matter in claims 4 and 6, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. As per MPEP 2144.05

6. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callahan 4,472,091.

Callahan has taught all the features of the claimed invention except that the non-linear input signal comprises frequencies in the range of between about 10Hz to 1000kHz, as well as the claimed subject in claim 20.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the non-linear input signal of Callahan to have frequencies in the range of between about 10Hz to 1000kHz or 15KHz to 50 KHZ, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. As per MPEP 2144.05

7. Claims 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callahan 4,472,091.

Callahan has taught all the features of the claimed invention except that the number of superpositioned modulating frequencies is at least three, as well as the claimed subject in claims 64-65.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the number of superpositioned modulating frequencies of Callahan to be at least three or four, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. As per MPEP 2144.04

Further, with respect to claim 65, the four modulating frequencies are in the range of between about 10-15Hz. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the four modulating

Art Unit: 3754

frequencies of Callahan to be in the range of between about 10-15Hz, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. As per MPEP 2144.05

Allowable Subject Matter

8. Claims 12-14,17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Crowder et al. 7,118,010 disclose other type of dispensing dry powder.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick C. Nicolas whose telephone number is (571)-272-4931. The examiner can normally be reached on Monday - Friday from 9:00 AM to 5:00 PM.

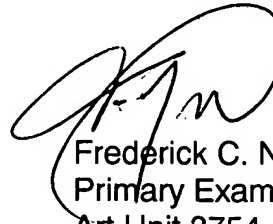
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver, can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

Art Unit: 3754

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FN
February 26, 2007

 2/26/07
Frederick C. Nicolas
Primary Examiner
Art Unit 3754